

WEYMOUTH TOWNSHIP MUA 2018 ANNUAL WATER QUALITY REPORT

WEYMOUTH TOWNSHIP
MUNICIPAL UTILITIES AUTHORITY
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FOR REPORTING PERIOD JANUARY 1, 2017 – DECEMBER 31, 2017

We are pleased to present our *Annual Drinking Water Quality Report* to you covering the period from *January 1, 2017 to December 31, 2017*. The Federal Safe Drinking Water Act (SDWA) requires that utilities issue an annual Consumer Confidence Report. We designed this report to inform you about the quality of the water we deliver to you every day.

WTMUA Board Members

<i>Fred Adams</i>	<i>Chairperson</i>
<i>Bob Knight</i>	<i>Vice Chairperson</i>
<i>Joe Botero</i>	<i>Treasurer</i>
<i>Amelia Messina</i>	<i>Member</i>
<i>Andrea Mariner</i>	<i>Member</i>
<i>Donna Schneider</i>	<i>Alternate #1</i>
<i>Cindy Laigaie</i>	<i>Alternate #2</i>
<i>Alisa A. Owen</i>	<i>Secretary/CFO</i>

The WTMUA's public meetings are held on the third Tuesday of each month. Meetings begin at 7:00 P.M. at the Belcoville Fire House.

GENERAL OVERVIEW

- The Weymouth Township Municipal Utilities Authority (WTMUA) was created by Township Ordinance #243-80 on December 29, 1980. Since then, its primary commitment has been supplying Weymouth Township with quality drinking water and wastewater disposal. The Authority is pleased to report that our water meets or exceeds the standards of the Safe Drinking Water Act.
- The purpose of this annual report is to better inform you of the source of your water and how it is treated and tested. A chart is included to show that all contaminants detected in your water are within United States Environmental Protection Agency (USEPA) and New Jersey Department of Environmental Protection (NJDEP) guidelines.
- Water is supplied from Hamilton Township MUA. Their water system is comprised of five (5) municipal wells sourced in the Kirkwood-Cohansey Aquifer and the Lower Kirkwood (800' Sands) Aquifer (water containing ground strata).
- All of the water produced by the HTMUA is chlorinated for disinfection of viruses and bacteria and treated with zinc pyrophosphate to reduce corrosiveness. At four of the wells, hydrated lime is added to adjust pH and the raw water is aerated to remove carbon dioxide, volatile organics and hydrogen sulfides. The removal of iron via pressure filtration is performed at two wells. All well facilities are monitored daily to ensure proper treatment.

INFORMATION ABOUT YOUR DRINKING WATER

This report contains important information about your drinking water. If you do not understand it, please have someone translate it for you. *Este informe contiene información muy importante sobre su agua beber. Tradúzcalo ó hable con alguien que lo entienda bien.*

FACTS ABOUT WATER

- Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that the water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the EPA's Safe Drinking Water Hotline (1-800-426-4791).
- The HTMUA's water supply is from groundwater wells. The sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs, and wells. As water travels over the surface of the land or through the ground, it dissolves naturally occurring minerals and, in some cases, radioactive material, and can pick up substances resulting from the presence of animals or from human activity.
- Contaminants that may be present in source water include:
 - Microbial contaminants, such as viruses and bacteria, which may come from sewage treatment systems, agricultural livestock operations, and wildlife.
 - Inorganic contaminants, such as salts and metals, which can be naturally-occurring or result from urban storm water runoff, industrial or domestic wastewater discharges, oil and gas production, mining, or farming.

- Pesticides and herbicides, which may come from various sources such as agriculture, urban storm water runoff, and residential uses.
- Organic chemical contaminants, including synthetic and volatile organic chemicals, which are by-products of industrial processes and petroleum production and can also, come from gas stations, urban storm runoff, and septic systems.
- Radioactive substances, which can be naturally occurring or be the result of oil and gas production and mining activities.

In order to ensure that tap water is safe to drink, the EPA prescribes regulations which limit the amount of certain contaminants in water provided by public water systems. Food and Drug Administration regulations establish limits for contaminants in bottled water which must provide the same protection for public health.

Guidelines for Proper Disposal of Medications

Over the counter and prescription medications should **NOT** be disposed of down the drain or flushed down the toilet. Wastewater facilities are not designed to remove pharmaceutical compounds and they may end up in your drinking water. Properly disposing of unwanted and expired prescriptions and over the counter medications in the trash promotes protects the source water.

The Four Steps for Proper Disposal

1. Keep medicine in the original container. Mark out any personal information on the labels.
2. Dilute the medicine with water then mix the liquid medicine with undesirable substances like coffee grounds or dirt.
3. Place bottles in an opaque container, secure the lid or wrap in a dark colored plastic bag.
4. Hide the container in the trash. Do **NOT** recycle!

HEALTH NOTES

Vulnerable Populations

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons, such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly persons, and infants can be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. EPA/CDC guidelines on appropriate means to lessen the risk of infection by Cryptosporidium and other microbial contaminants are available from the Safe Drinking Water Hotline (1-800-426-4791).

Special Considerations Regarding Children, Pregnant Women, Nursing Mothers, and Others

Children may receive a slightly higher amount of a contaminant present in the water than adults, on a body weight basis, because they may drink a greater amount of water per pound of body weight than adults. For this reason, reproductive or developmental effects are used for calculating a drinking water standard, if these effects occur at lower levels than other health effects of concern. If there is sufficient toxicity information for a chemical (for example, lack of data on reproductive or developmental effects), an extra uncertainty factor may be incorporated into the calculation of the drinking water standard, thus making the standard more stringent to account for additional uncertainties regarding these effects. In the cases of lead and nitrate, effects on infants and children are the health endpoints upon which the standards are based.

ALUMINUM: Naturally occurring in the environment. Aluminum levels well in excess of recommended upper limits may develop into gastro-intestinal tract irritation.

BARIUM: Some people who drink water containing barium in excess of the MCL over many years could experience an increase in their blood pressure.

IRON: Iron occurs naturally in South Jersey ground waters. Our source water with iron levels above the recommended upper limits is treated to reduce those levels and minimize the adverse effects iron may have. The recommended upper limit for iron is based on unpleasant taste of the water and staining of laundry. Iron is an essential nutrient, but some people who drink water with iron levels well above the recommended upper limit could develop deposits of iron in a number of organs of the body.

LEAD: If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Lead in drinking water is primarily from materials and components associated with service lines and home plumbing. The HTMUA/WTMUA is responsible for providing high quality drinking water, but cannot control the variety of materials used in plumbing components. When your water has been sitting for several hours, you can minimize the potential for lead exposure by flushing your tap for 30 seconds to 2 minutes before using your water for drinking or cooking. If you are concerned about lead in your water, you may wish to have your water tested. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available from the Safe Drinking Water Hotline or at <http://www.epa.gov/safewater/lead>.

Infants and children who drink water containing lead in excess of the action level could experience delays in their physical or mental development. Children could show slight deficits in attention span and learning abilities. Adults who drink this water over many years could develop kidney problems or high blood pressure.

MANGANESE: The recommended upper limit for manganese is based on staining of laundry. Manganese is an essential nutrient, and toxicity is not expected from levels that would be encountered in drinking water.

MERCURY: Some people who drink water containing inorganic mercury well in excess of the MCL over many years could experience kidney damage.

NITRATE: Nitrate in drinking water at levels above 10 ppm is a health risk for infants of less than six months of age. High nitrate levels in drinking water can cause blue baby syndrome. Nitrate levels may rise quickly for short periods of time because of rainfall or agricultural activity. If you are caring for an infant, you should ask for advice from your health care provider.

RADIONUCLIDES: Certain minerals are radioactive and may emit a form of radiation known as Alpha Emitters and Combined Radium. Some people who drink water containing Alpha Emitters and Combined Radium in excess of the MCL over many years may have an increased risk of getting cancer.

SODIUM: For healthy individuals, the sodium intake from water is not important because a much greater intake of sodium takes place from salt in the diet. However, sodium levels above the recommended upper limit may be of concern to individuals on a sodium-restricted diet.

SULFATE: Levels above the recommended MCL can cause diarrhea and dehydration.

TRIHALOMETHANE & HALOACETIC ACID (DISINFECTANT BY-PRODUCTS): Some people who drink water containing Trihalomethanes and Haloacetic Acid in excess of the MCL over many years may experience problems with their liver, kidneys or central nervous systems, and may have an increased risk of getting cancer.

FOR ADDITIONAL INFORMATION

If you desire more information about your water you can contact the **HTMUA** at (609) 625-1872. Additional information can also be obtained from the USEPA Safe Drinking Water Hotline (1-800-426-4791) and from the NJDEP Bureau of Safe Drinking Water (609-292-5550).

WATER CONSERVATION & PROTECTION

- Take short showers - a 5-minute shower uses 4 to 5 gallons of water as compared to up to 50 gallons for a bath.
- Shut off water while brushing your teeth, washing your hair and shaving and save up to 500 gallons a month.
- Use water-efficient showerheads. They are inexpensive, easy to install and can save you up to 750 gallons a month.
- Run your clothes washer and dishwasher only when they are full. You can save up to 1,000 gallons a month.
- Water plants only when necessary
- Fix leaky toilets and faucets. Faucet washers are inexpensive and only take a few minutes to replace. To check your toilet for a leak, place a few drops of food coloring in the tank and wait. If it seeps into the toilet bowl without flushing, you have a leak. Fixing it or replacing it with a new, more efficient model can save up to 1,000 gallons a month.
- Adjust your sprinklers so only your lawn is watered. Apply water only as fast as the soil can absorb it and during the cooler parts of the day to reduce evaporation. Refrain from directing sprinklers towards motor vehicles, lawn furniture, etc.
- Teach your kids about water conservation to ensure a future generation that uses water wisely. Make it a family effort to reduce the next water bill!
- The **Weymouth Township MUA** and the **Hamilton Township MUA** encourage everyone to utilize water wisely, and now with greater emphasis on security issues, please alert us to anything that may adversely affect the supply of quality and safe water to our customers.

Source Water Assessment Summary

A State Review of Potential Contamination Sources Near Your Drinking Water

The Department of Environmental Protection (DEP) has conducted an assessment of the water sources that supply each public water system in the state, including the **WTMUA**. The goal of this assessment was to measure each system's susceptibility to contamination, not actual (if any) contamination measured in a water supply system.

The assessment of your water system, the **Weymouth Township MUA**, involved:

- Identifying the area (known as the source water assessment area) that supplies water to your public drinking water system;
- Inventorying any significant potential sources of contamination in the area; and
- Analyzing how susceptible the drinking water source is to the potential sources of contamination.

DEP evaluated the susceptibility of all public water systems to eight categories of contaminants. These contaminant categories are explained in the following pages and include a summary of the results for WTMUA's water system and a map of the water system's source water assessment area.

A public water system's susceptibility rating (L for low, M for medium and H for high) is a combination of two factors. H, M, and L ratings are based on the potential for a contaminant to be at or above 50% of the Drinking Water Standard or MCL (H), between 10 and 50% of the standard (M) and less than 10% of the standard (L).

Factors that determine water contamination:

- How "sensitive" the water supply is to contamination. For example, a shallow well or surface water source, like a reservoir, would be more exposed to contamination from the surface or above ground than a very deep well.
- How frequently a contaminant is used or exists near the source. This is known as "intensity of use." For example, the types of activities (such as industry or agriculture) surrounding the source.

The susceptibility rating does not tell you if the water source is actually contaminated. The Consumer Confidence Report annually issued by your water utility contains important information on the results of your drinking water quality tests, as required by the federal Safe Drinking Water Act.

Where does drinking water come from?

There are two basic sources of drinking water:

- Ground water is water found beneath the Earth's surface. Ground water comes from rain and snow seeping into rock and soil. Ground water is stored in underground areas called aquifers. Aquifers supply wells and springs. Wells in New Jersey range from about 15 feet to 2,000 feet deep.
- Surface water is the water naturally open to the atmosphere, such as rivers, lakes, streams and reservoirs. Precipitation that does not infiltrate the ground or evaporate into the sky runs off into surface water bodies.

Ground water can seep into a stream, river or other surface water body, recharging surface water bodies. Likewise, under some circumstances, surface water can seep into an adjacent aquifer. A water system obtains its water from 1) wells drilled into the ground that pump out ground water; 2) devices called surface water intakes placed on a river, stream or reservoir; or 3) both.

What factors may affect the quality of your drinking water source?

A variety of conditions and activities may affect the quality of your drinking water source. These include geology (rock and soil types); depth of a well or location of a surface water intake; how the land surrounding the source is used (for industry, agriculture or development); the use of pesticides and fertilizers; and the presence of contaminated sites, leaking underground storage tanks, and landfills.

What steps are being taken now to ensure my drinking water quality?

The DEP has numerous programs in place to maintain and protect the quality of our State's water resources. For example, the Safe Drinking Water Program is designed to ensure that water delivered for human consumption meets DEP's stringent health-based drinking water standards. Additionally, DEP has permitting, waste management, and clean up programs in place to avoid and control potential contamination. Key DEP drinking water protection initiatives will be phased-in over time in Source Water Assessment areas to advance existing program protections.

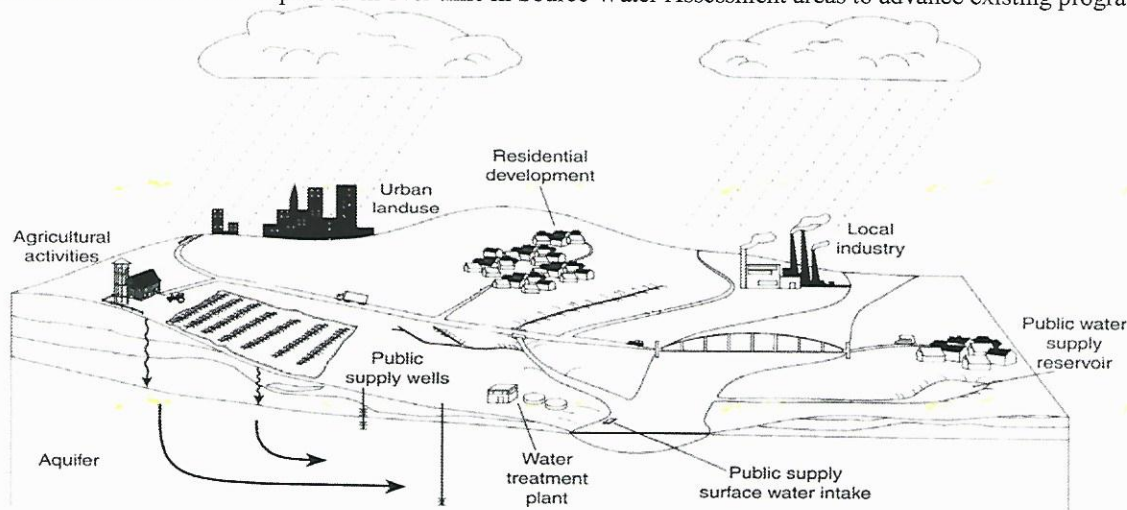


Illustration courtesy of USGS

Among the factors that may affect the quality of drinking water are the types of rock and soil and how the land is used. While some rain and snow evaporates into the sky, most of it runs off into nearby rivers and streams or seeps into the ground. Drinking water comes from underground aquifers or surface water bodies.

What can you and others do to help? Federal law requires each state to establish and implement a Source Water Assessment Program. While government at the state and local levels can do their part, there are actions that you and your neighbors in homes and businesses can take now to help protect our precious and shared natural resource.

Here are just a few ways you and others can help ensure clean and plentiful water for New Jersey – now and in the future. Join us today for a clean water future.

In your home or business:

- Dispose of waste properly. Some materials such as motor oil, paint, flea collars, and household cleaners have the potential to contaminate source water. Contact your local Department of Public Works for proper household hazardous waste disposal.
- Limit your use of fertilizer, pesticides, and herbicides.

Here are some actions that municipal and county officials/local and county planners can take that you can help encourage and support.

- Manage and work with owners of existing potential contaminant sources to minimize potential contamination.
- Establish regulations prohibiting or restricting certain activities or land uses within the source water assessment area. Take appropriate enforcement action when necessary.
- Update municipal master plans to ensure greater protection.
- Purchase lands or create conservation easements within the source water assessment area.

WTMUA WATER FACTS

- The New Jersey Department of Environmental Protection (NJDEP) has completed and issued the Source Water Assessment Report and Summary for this public water systems, which is available at www.state.nj.us/dep/swap/ or by contacting the NJDEP Bureau of Safe Drinking Water at 609-292-5550. A copy of the summary is included in this report.
- The USEPA requires the monitoring of eighty (80) contaminants in drinking water. Listed are those that were detected in our water source. (*The HTMUA samples for over one hundred [100] contaminants.*) Sampling results in this report are from the 2017 calendar year unless indicated otherwise.
- The WTMUA has monitored for the USEPA's (EPA) Third Unregulated Contaminants Monitoring Regulations (UMCR). Unregulated contaminants are those for which the EPA has not established drinking water standards. The purpose of unregulated contaminants monitoring is to help the EPA determine their occurrence in the drinking water and potential for future regulation.
- The WTMUA's Public Water System Identification Number (PWSID#) is 0123001.

INORGANIC CHEMICALS

SUBSTANCE (Units)	MCL	MCLG	LEVEL DETECTED	RANGE: From/To	TYPICAL SOURCE
Barium (PPM)	2.0	2.0	0.0894	0.0011 to 0.0894	Erosion of natural deposits
Lead (PPB)	15.0	0.0	< 2 (90 th Percentile)	<2 (Sample Year 2015)	Corrosion of household plumbing systems
Copper (PPB)	1.3	1.3	<0.05	<0.05 (Sample Year 2015)	Corrosion of household plumbing systems
Mercury (PPB)	2.0	2.0	0.91	0.05 to 0.91	Erosion of natural deposits
Nitrates (PPM)	10.0	10.0	0.725	< 0.2 to 0.725	Erosion of natural deposits Fertilizer runoff; wastewater Discharges; erosion of natural deposits

ORGANIC CHEMICALS

SUBSTANCE (Units)	MCL	MCLG	YOUR WATER	RANGE	SAMPLE YEAR	VIOLATION	TYPICAL SOURCE
Trihalomethane (PPB)	80.0	N/A	10.6 (Highest LRAA at Site #2)	10.0 to 10.6	2017	No	A by-product of drinking water disinfection
Haloacetic Acid (PPB)	60.0	N/A	N.D. (Highest LRAA at Site #1)	N.D.	2017	No	A by-product of drinking water disinfection

RADIONUCLIDES

SUBSTANCE (Units)	MCL	MCLG	LEVEL DETECTED:	RANGE: From/To	SAMPLE YEAR	TYPICAL SOURCE
Total Alpha (pCi/L)	15.0	0	10.3	< 3.0 to 10.3	2017	Erosion of natural deposits
Combined Radium (pCi/L)	5.0	0	3.4	< 1.0 to 3.4	2017	Erosion of natural deposits

MICROBIOLOGICAL SUBSTANCES

SUBSTANCE (Units)	MCL	MCLG	YOUR WATER	SAMPLE DATE	VIOLATION	TYPICAL SOURCE
Total Coliform Bacteria	0 positive sample Per month	0	0 Positive Samples	N/A	No	Naturally present in the environment
Fecal Coliform or E. coli Bacteria	0 positive sample Per month	0	0 Positive Samples	N/A	No	Human or animal fecal waste

OTHER SUBSTANCES

SUBSTANCE (Units)	MCL	MCLG	RUL	LEVEL DETECTED	RANGE: From/To	TYPICAL SOURCE
Iron (PPM)		N/A	0.3	<0.15	<0.15	Erosion of natural deposits
Sodium (PPM)		N/A	50.0	28.0	2.7 to 28.0	Erosion of natural deposits; salt water intrusion
Manganese (PPB)		N/A	50.0	<5	<5	Erosion of natural deposits
Sulfate (PPM)		N/A	250	10.6	1.9 to 10.6	Erosion of natural deposits
Aluminum (PPM)	0.2	N/A	0.2	0.175	0.0877 to 0.175	Erosion of natural deposits
Zinc (PPM)		N/A	5.0	0.157	0.0653 to 0.157	Erosion of natural deposits
Chloride (PPM)		N/A	250	55.2	2.11 to 55.2	Erosion of natural deposits and disinfection with chlorination

UNREGULATED CONTAMINANTS

SUBSTANCE (Units)	MCL	MCLG	AVERAGE LEVEL DETECTED	RANGE: From/To	SAMPLE YEAR	TYPICAL SOURCE
Chlorate (PPb)	N/A	N/A	57.556	57.556 to 57.556	2015	Erosion of natural deposits
Cobalt (PPb)	N/A	N/A	1.47	1.233 to 1.707	2015	Erosion of natural deposits
Strontium (PPb)	N/A	N/A	63.433	21.516 to 146.757	2015	Erosion of natural deposits

DEFINITIONS:

**Action Level: The concentration of a contaminant which, if exceeded (90th percentile), triggers treatment or other requirements which a water system must follow.
 Maximum Contaminant Level (MCL): The highest level of a contaminant allowed in drinking water. MCL's are set as close to the MCLG's as feasible using the best available treatment technology.
 Maximum Contaminant Level Goal (MCLG): The level of contaminant in drinking water below which there is no known or expected risk to health. MCLG's allow for a margin of safety.
 Method Detection Limits (MDL): Smallest amount that can be detected by laboratory instruments.*

*N/A: Not available
 N.D.: None detected*

*Parts Per Billion (PPB): One part in one billion parts of water. (Comparisons would be one second in 32 years, one inch in 16,000 miles or one cent in \$10,000,000).
 Parts Per Million (PPM): One part in one million parts of water. (Comparisons would be one second in 12 days, one inch in 16 miles or one cent in \$10,000).
 PicoCuries Per Liter (pCi/L): One unit of radioactivity (0.037 nuclear disintegrations per second) in one liter of water
 Recommended Upper Limit (RUL): The level of a secondary contaminant considered acceptable up to this amount.
 Treatment: A required process intended to reduce the level of a contaminant in drinking water (aerated).*